

REMARKS

Reconsideration is requested.

Claims 253-277 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,600,428. Enclosed herewith is a Terminal Disclaimer which obviates the rejection. As no other rejection has been made against claims 257-277, claims 257-277 are therefore allowable.

Claims 253-256 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,514,731 to Falck et al. or U.S. Patent No. 5,406,297 to Caswell et al. in combination with U.S. Patent No. 4,656,463 to Anders et al., U.S. Patent No. 5,448,242 to Sharpe et al., U.S. Patent No. 5,450,087 to Hurta et al., and further in view of U.S. Patent No. 4,868,908 to Pless et al. or U.S. Patent No. 5,103,156 to Jones et al.

Claim 253, as amended, recites a radio frequency identification device comprising an integrated circuit including a transmitter and a receiver, the integrated circuit being adapted to be coupled to a battery, and further including a comparator configured to compare the voltage of the battery with a predetermined voltage and to generate a low battery signal if the voltage of the battery is less than the predetermined voltage, the integrated circuit further including a band gap voltage generator configured to generate a reference voltage, the predetermined voltage being the reference voltage produced by the

band gap voltage generator; a wake-up circuit configured to activate the receiver from time to time so the receiver can listen for any RF command from an interrogator; and a power-up circuit configured to provide a power-up signal to the processor in response to determining that the receiver received a valid RF signal.

Falck et al., Caswell et al., Anders et al., Sharpe et al., Hurta et al., Pless et al., and Jones et al. fail to teach or suggest a wake-up circuit configured to activate the receiver from time to time so the receiver can listen for any RF command from an interrogator; and a power-up circuit configured to provide a power-up signal to the processor in response to determining that the receiver received a valid RF signal, in combination with an integrated circuit including a transmitter, receiver, and comparator and all the other limitations of claim 253.

Therefore, claim 253 is allowable.

As claim 254 depends on claim 253, it too is allowable.

Claim 255 recites a radio frequency identification device comprising an integrated circuit including a transmitter and a receiver, the integrated circuit being adapted to be coupled to a battery, and further including a comparator configured to compare the voltage of the battery with a predetermined voltage and to generate a low battery signal if the voltage of the battery is less than the predetermined voltage, the integrated circuit further including a band gap voltage generator configured to generate a reference voltage, the predetermined voltage being the reference voltage produced by the band gap voltage generator,

the integrated circuit being configured to respond to commands received by the receiver from an interrogator, the integrated circuit further including a status register having, in operation, a value indicating whether battery voltage is less than the predetermined voltage, and the transmitter being configured to transmit the value of the status register in response to a command received by the receiver.

The rejection of claim 255 is respectfully traversed. It would not be obvious to combine Falck et al., Caswell et al., Anders et al., Sharpe et al., Hurta et al., Pless et al., and Jones et al. because a) there is no teaching in the references which would suggest their combination, and b) even if they were somehow combined, they do not produce the structure claimed.

The Falck et al. reference fails to teach or suggest an integrated circuit including a transmitter, receiver, and status register having, in operation, a value indicating whether battery voltage is less than the predetermined voltage, in combination with the other features of claim 255.

Additionally, the Falck et al. reference fails to teach or suggest the integrated circuit being adapted to be connected to a battery, and further including a comparator. The Falck et al. reference is silent in regard to integrated circuits in any context. Rather, the Falck et al. reference is directed to a memory for storing coded information (Abstract of Falck et al.).

While the Falck et al. reference does disclose a register 31, there is no discussion of using it to have, in operation, a value indicating whether battery voltage is less than the predetermined voltage.

The Caswell et al. reference fails to cure the deficiencies of Falck et al. The Caswell et al. reference fails teach or suggest an integrated circuit including a transmitter, receiver, comparator, and status register having, in operation, a value indicating whether battery voltage is less than the predetermined voltage, in combination with the other features of claim 255.

Rather, the Caswell et al. reference is directed to an inventory management system having a transponder, an interrogation transceiver and control devices. The term "register" does not appear anywhere in the Caswell et al. reference.

The Anders et al. reference fails to cure the deficiencies of either Falck et al. or Caswell et al. The Anders et al. reference fails to teach or suggest an integrated circuit including a transmitter, a receiver, a comparator, and status register, in combination with the other features of claim 255.

Rather, the Anders reference is directed to a LIMIS system having passive transceivers and active transceivers (Abstract of Anders et al.). The term "register" does appear, but only in the context of a cash register.

The Sharpe et al. reference fails to cure the deficiencies stated above. The Sharpe et al. reference fails to teach or suggest an integrated circuit

including a transmitter, receiver, comparator, and status register, in combination with the other features of claim 255.

The Sharpe et al. reference discloses among other things, a FLAGS register that indicates capabilities of transponder 14 to an interrogator 12. The battery consumption for powerup stages 2 and 3 is measured by a special conversion/calculation circuit on the digital ASIC 34. The battery consumption by these two stages are counted in a special register whose two high-order bits are included as part of the FLAGS register. The status of the two (MSB) bits indicates: 00: <174 mAH used; 01:174 mAH <->348 mAH used; 10:348 mAH <->522 mAH used; 11: >522 mAH used.

Counting consumption is not the same as using a comparator configured to compare the voltage of the battery with a predetermined voltage and to generate a low battery signal if the voltage of the battery is less than the predetermined voltage. Also, if counting consumption, there is no need to use a band gap voltage generator for comparison purposes. It would not be obvious to combine Sharpe et al. with the other references for these reasons.

The Hurta et al. reference fails to cure the deficiencies stated above. The Hurta et al. reference fails to teach or suggest an integrated circuit including a transmitter, receiver, comparator, and status register, in combination with the other features of claim 255.

The Hurta et al. reference, like the Sharp et al. reference, discloses a battery consumption gauge. The battery consumption for powerup stages 2 and

3 is measured by a special conversion/calculation circuit on digital ASIC 34. The battery consumption by these two stages are counted in a special register whose two high-order bits are included as part of the FLAGS register.

Again, counting consumption is not the same as using a comparator configured to compare the voltage of the battery with a predetermined voltage and to generate a low battery signal if the voltage of the battery is less than the predetermined voltage. Also, if counting consumption, there is no need to use a band gap voltage generator for comparison purposes. It would not be obvious to combine Hurta et al. with the other references for these reasons.

The Pless et al. reference fails to cure the deficiencies stated above. The Pless et al. reference fails to teach or suggest an integrated circuit having a transmitter, receiver, comparator, and status register, in combination with the other features of claim 255.

Rather, the Pless et al. reference is directed to a power supply down-conversion, regulation and low-battery system for battery powered implantable defibrillator (Abstract of Pless et al.). The Pless et al. reference provides no teaching or suggestion of a transmitter, or a receiver, in any context. It would not be obvious to combine Pless et al. with the other references because Pless et al. were operating in a different field of endeavor. One of ordinary skill in the RFID art would not turn to an implantable device art. Therefore, the combination of references is improper and should be withdrawn.

The Jones et al. reference fails to cure the deficiencies stated above. The Jones et al. reference fails to teach or suggest an integrated circuit having a transmitter, receiver, comparator, and status register, in combination with the other features of claim 255.

Rather, the Jones et al. reference is directed to a battery management chip including a temperature-sensing circuit (abstract of Jones et al.). The Jones et al. reference provides no teaching or suggestion of a transmitter, or a receiver, in any context.

There is no teaching or suggestion in the cited references of which elements should be selected from one reference, and somehow combined with elements selected from another reference.

Any allegation that such a considerable number of references teach or suggest a combination of elements as recited in claim 255 is unsupportable in view of the lack of evidence in the references of a motivation to combine, and in further view of the undue experimentation required to achieve such an end.

Therefore, claim 255 is allowable. As claim 256 depends on claim 255, it too is allowable.

In view of the foregoing, allowance of claims 253-277 is requested.

The undersigned is available for telephone consultation at any time.

Respectfully submitted,

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By:

  
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